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FLOOD INSURANCE STUDY

ORIGINAL

VILLAGE OF CHANDLERVILLE, ILLINOIS

CASS COUNTY

SEPTEMBER 18, 1986

Federal Emergency Management Agency

COMMUNITY NUMBER - 170023

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FLOOD INSURANCE STUDY

VILLAGE OF CHANDLERVILLE,
CASS COUNTY,
ILLINOIS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the Village of Chandlerville, Cass County, Illinois, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in its efforts to promote sound flood plain management. Minimum flood plain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, flood plain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgments

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this study were performed by Crawford, Murphy & Tilly, Inc., under contract to the U.S. Army Corps of Engineers (COE), Rock Island District (the Study Contractor) for the Federal Emergency Management Agency (FEMA), under Inter-Agency Agreement No. EMW-E-1153, Project Order No. 1, Amendment No. 23. This study was completed in April 1985.

1.3 Coordination

At the direction of the Project Officer, no time and cost meeting was held for this study due to time constraints. Results of the hydrologic analysis were coordinated with the Illinois Department of Transportation, Division of Water Resources (DWR).

On October 29, 1985, the results of this Flood Insurance Study were reviewed and accepted at a final coordination meeting attended by representatives of the Study Contractor, FEMA, and the community.

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2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated area of the Village of Chandlerville, Cass County, Illinois. The area of study is shown on the Vicinity Map (Figure 1).

Flooding caused by overflow of portions of the Sangamon River and Panther Creek was studied in detail within the community.

The areas studied were selected with priority given to all known flood hazard areas and areas of projected development or proposed construction through April 1990. The scope and methods of study were proposed to and agreed upon by FEMA and the Village of Chandlerville.

2.2 Community Description

The Village of Chandlerville is located in northern Cass County, in west-central Illinois. The total land area contained within the corporate limits is approximately 1.06 square miles. Bordered on all sides by the unincorporated areas of Cass County, the village is situated approximately 33 miles northwest of Springfield and 55 miles southeast of Peoria. The village is primarily an agricultural service community and is served by State Route 78. According to U.S. Census Bureau figures, the population increased from 762 in 1970 to 842 in 1980 (Reference 1).

The soils in Chandlerville are derived from materials deposited during the glacial periods, as well as more recent sediment deposits in the flood plain by the Sangamon River. The original glacial deposits have been altered by wind and water action. Windblown glacial loess in the bluff and upland areas is up to 100 feet thick. The layer of loess in the flood plain is much thinner and is deposited as the bluffs are eroded by surface-water runoff. Saturated sand and gravel underlies the loess in the flood plain of the Sangamon River in Chandlerville. The topsoil can be divided into four soil associations.

The Hamburg-Fayette-Seaton association is located in the higher elevations along the southeastern border of the village. This association is a light-colored, well-drained upland silty or sandy loam and is characterized by moderate to steep slopes. This association is used mainly for pasture and woodland, although a few areas are cultivated.

The Bloomfield-Palinfield-Alvin association covers the steep areas that lie between low bottom land and the upland area. Excluding the developed areas of Chandlerville, this association is used for cultivated crops in the less sloped areas and is wooded or used for pasture in the steeper areas. The association consists of sand or sandy loam soil.

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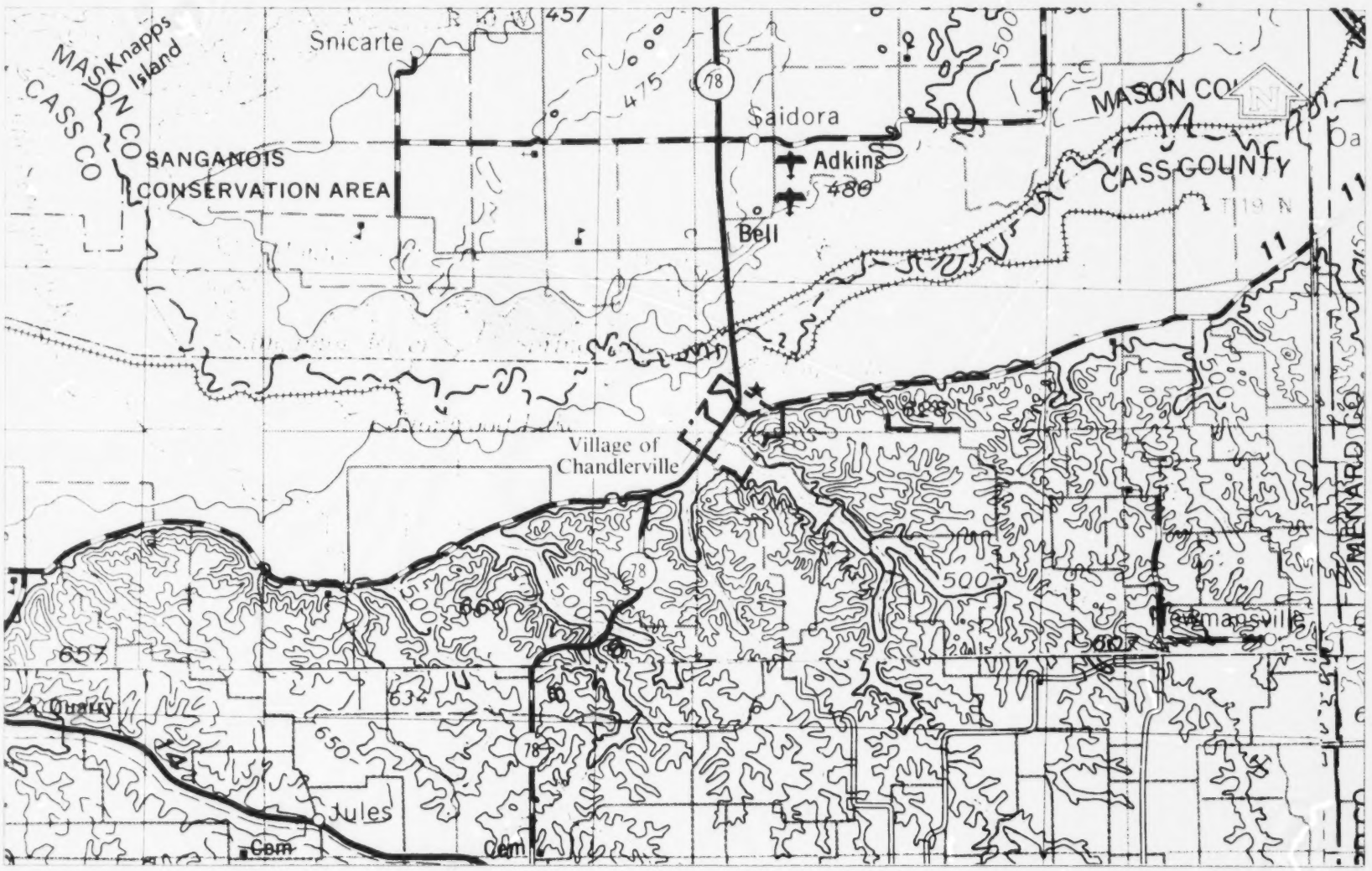

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

VILLAGE OF CHANDLERVILLE, IL

(CASS CO.)

APPROXIMATE SCALE

2 0 2 4 6 MILES

VICINITY MAP

The Worther-Littleton-Raddle association is located in the flood plain areas except in the northwestern corner of Chandlerville. This association consists of moderately to well-drained clay and silt loam soils that have been eroded from the bluffs and is nearly level to moderately sloping. Land in this association is generally used for cultivating crops.

The Beaucoup-Ambraw-Dockery association is located in the flood plain in the northwestern corner of Chandlerville and generally occurs between the Sangamon River and the Worthen-Littleton-Raddle association. This association is a poorly-drained clay and silt soil having a nearly level to gently sloping surface. This association is used mainly for cultivated crops, although some areas are wooded (Reference 2).

The climate in west-central Illinois is characterized by warm to hot summers and cool to cold winters. The mean annual temperature is approximately 53 degrees Fahrenheit (F.). Monthly mean temperatures range from 25 degrees F., in January to 76 degrees F., in July. Average monthly precipitation ranges from 1.6 inches in January to 4.0 inches in June. Average annual snowfall is approximately 20 inches and has varied from 6 inches in 1928 to 46 inches in 1926. There are no climatological recording stations in Chandlerville. Climatological data are derived from various towns with recording stations that are within 30 miles of Chandlerville (Reference 3).

The Sangamon River, which flows westerly through Cass County and forms the northern county boundary, is one of the principal rivers in Illinois. Its length of 241 miles extends from east-central Illinois through Decatur and Springfield to the Illinois River. Chandlerville is located approximately 15 miles upstream of the mouth of the Sangamon River and its drainage area encompasses 5,208 square miles at this point.

Panther Creek, a tributary that flows northwesterly to the Sangamon River, is 17.2 miles long and has a drainage area of 54.6 square miles at the confluence with the Sangamon River.

Chandlerville is located approximately 1.0 mile southeast of the confluence of the Sangamon River and Panther Creek. Portions of the Sangamon River and Panther Creek flood plains, and the bluffs at the edge of these flood plains, are within the village corporate boundaries. Most of the residences and businesses in Chandlerville are built at the edge of these flood plains or on the lower parts of the bluffs at the edge of these flood plains. Elevations within Chandlerville range from about 450 feet to 620 feet National Geodetic Vertical Datum of 1929 (NGVD). Land use within Chandlerville is primarily residential or commercial, with a substantial portion also used for farming.

2.3 Principal Flood Problems

Past flooding on the Sangamon River and Panther Creek indicates that flooding may occur during any season of the year; however, most major floods have occurred during March, April, May, and June and are usually the result of spring rains.

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A number of major floods have occurred on the Sangamon River during the 20th Century. The five worst floods are presented below.

SANGAMON RIVER

FIVE WORST FLOODS

Date	Discharge (cfs)[1]	Frequency Interval (years)
October 1926	46,300	9
May 1943	123,000	500+
April 1973	45,800	9
April 1979	55,900	16
December 1982	71,600	45

[1]cubic feet per second

The flood in 1982 overtopped the levee downstream of the State Route 78 bridge and caused damage to buildings within the Village of Chandlerville.

Flooding that occurs on Panther Creek may be elevated by flooding from the Sangamon River due to the backwater effect that results. However, the effect of backwater on Panther Creek is expected to be minor upstream of State Route 78, and flooding of the creek can be expected to occur independently of the river. The estimated 100-year discharge for Panther Creek at the confluence with the Sangamon River is 9,800 cfs. According to residents of the village, a major flood occurred on Panther Creek in 1981 when floodwaters reached an elevation of approximately 467 feet NGVD upstream of Main Street. The floodwaters overtopped Main Street and State Route 78 and caused damage to several homes within the village.

2.4 Flood Protection Measures

Systems of levees along both the Sangamon River and Panther Creek serve as flood protection devices. To the north of the Sangamon River is the Farmer's Drainage and Levee District. The first Federal project constructed in the Farmer's Drainage and Levee District was authorized by the Flood Control Act of June 22, 1936. Completed in 1941, it consisted of reconstruction of the riverfront levee along the Sangamon River and construction of a new riverfront and flank levee. The project is owned, operated, and maintained by the Farmer's Drainage and Levee District. Periodic inspections are performed to assure integrity of the system. Based on FEMA Levee Policy and the data presented in this study, the existing levee will provide approximately 10-year flood protection.

The Village of Chandlerville is protected on the south side of the Sangamon River by Town Levee, which extends approximately 3,000 feet upstream of State Route 78. According to a local official, Town Levee was constructed in the mid- to late 1930s and was raised approximately 2 feet in the late 1970s. The village owns and maintains Town Levee. Based on FEMA

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Levee Policy and the data presented in this study, the existing levee will provide approximately 10-year flood protection.

The village is also protected on the south side of the Sangamon River by Bell Levee, which runs from State Route 78 downstream to the mouth of Panther Creek. Bell Levee also extends along the eastern side of Panther Creek from its mouth upstream to State Route 78. Bell Levee is privately owned and maintained by the three landowners who own the land on which it is located. According to one of the landowners, Bell Levee was constructed prior to 1930 and was substantially raised in the late 1930s. The levee was overtopped in the May 1943 flood and was raised in the late 1940s and again in 1980. The levee has had the same alignment since it was constructed. Based on FEMA Levee Policy and the data presented in this study, the existing Bell Levee will provide approximately 5-year flood protection along the Sangamon River and approximately 5-year flood protection along Panther Creek.

Panther Creek Levee, between State Route 78 and Main Street on the northern side of Panther Creek, is owned and maintained by the village. The date of construction is not known. A 2-foot high concrete floodwall was constructed by the village in 1982. The floodwall is parallel to Main Street along its eastern side and extends from a point 500 feet north of the main channel of Panther Creek to a point 950 feet north of the main channel of Panther Creek. Based on FEMA Levee Policy and the data presented in this study, the existing Panther Creek Levee provides approximately 5-year flood protection and the concrete floodwall provides approximately 15-year flood protection.

Levees exist in the study area that provide the community with some degree of protection against flooding. However, it has been ascertained that these levees may not protect the community from rare events such as the 100-year flood. The criteria used to evaluate protection against the 100-year flood are 1) adequate design, including freeboard, 2) structural stability, and 3) proper operation and maintenance. Levees that do not protect against the 100-year flood are not considered in the hydraulic analysis of the 100-year flood plain.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than one year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (one-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported

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herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each riverine flooding source studied in detail affecting the community.

Discharges were developed for the Sangamon River at the location where State Route 78 crosses the river, about 0.6 mile north of Chandlerville. River gaging data from 1910 to 1983 were available for the Sangamon River gage at Oakford, Illinois (U.S. Geological Survey Gage No. 05583000), which is located 10.3 river miles upstream. The weighted or best estimate of the peak flows at the Oakford gage was computed using the method outlined in "Water Resources Investigations 77-117" (Reference 4). This method of weighting uses the discharges from the gaging station and discharges computed from statewide regression equations. These equations relate drainage area, main channel slope, rainfall intensity, and an aerial factor to the peak discharges. The weighted or best estimate of discharges at the Oakford gage was then adjusted for the Chandlerville site using the statewide regression equations.

Discharges were developed for Panther Creek just upstream of its confluence with the Sangamon River and just upstream of its confluence with Little Panther Creek, just upstream of where State Route 78 crosses Panther Creek. Discharges were computed using rainfall excess applied to a synthetic unit hydrograph.

Unit hydrographs were determined from the drainage basins upstream of these locations using regionalized equations in "Derivation and Regionalization of Unit Hydrograph Parameters for Illinois (Dam Safety Program)" (Reference 5). These unit hydrographs were then adjusted by the methods given in Reference 5 to a duration that would be convenient for input to the COE HEC-1 computer program (Reference 6). The Snyder's synthetic unit hydrograph coefficients were then determined for these adjusted unit hydrographs.

The rainfall amounts used to determine peak runoff were obtained from the charts in the U.S. Weather Bureau Technical Paper No. 40 (Reference 7).

Loss rates for the drainage areas were computed using the U.S. Department of Agriculture, Soil Conservation Service (SCS), runoff curve number method. The approximate percentage of soils in each of the four SCS hydrologic soil groups and the approximate land use percentages were determined. Runoff curve numbers were then determined using antecedent moisture condition II.

The synthetic unit hydrograph parameters, rainfall amounts, and curve numbers were input to the COE HEC-1 computer program (Reference 6), which simulates the surface runoff response of a drainage basin. Peak flows for the Panther Creek drainage basin were computed by the COE HEC-1 computer program.

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Peak discharges for the 10-, 50-, 100-, and 500-year floods of each flooding source studied in detail in the community are shown in Table 1.

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ MILES)	PEAK DISCHARGE (CFS) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
SANGAMON RIVER at State Route 78	5,208	50,000	75,900	86,800	112,000
PANTHER CREEK just upstream of confluence with the Sangamon River	54.6	5,400	8,300	9,800	13,100
just upstream of confluence with Little Panther Creek	48.6	5,300	8,100	9,600	12,700

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Cross sections for the backwater analyses of the Sangamon River were obtained by field surveys performed by the COE. Some of the cross sections for the backwater analyses of Panther Creek were obtained by field surveys performed by the COE. Some of these cross sections were extended by the use of 1" = 400' aerial topographic mapping at a scale of 1:4800 with a contour interval of 2 feet (Reference 8). Elevation and structural data for the State Route 78 and Main Street bridges over Panther Creek were obtained from the bridge plans for those structures (References 9 and 10). Additional cross sections near the bridges were obtained using the above-mentioned 1:4800 topographic mapping.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles. For stream segments for which a floodway was computed (Section 4.2), selected cross-section locations are also shown on the Flood Insurance Rate Map.

Roughness factors (Manning's "n") used in the hydraulic computations were chosen by engineering judgment and based on field observations of the streams and flood plain areas. "Open-Channel Hydraulics" (Reference 11) was used as a guide in the choice of roughness factors. The roughness value of the main channel of the Sangamon River was 0.034 while flood plain roughness values ranged from 0.052 to 0.077. Roughness values for the main channel of Panther Creek ranged from 0.050 to 0.060, while flood plain roughness values ranged from 0.040 to 0.120.

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Water-surface elevations of floods of the selected recurrence intervals were computed through use of the COE HEC-2 step-backwater computer program (Reference 12). This computer model was calibrated for the Sangamon River using historic floodwater profiles. The May 1943 flood with a peak flow of 123,000 cfs was used to calibrate the roughness values, assuming the levees were overtopped. With the chosen roughness values, the computed profile was within 0.2 foot of the measured profile for the May 1943 flood. The May 1968 flow of 30,000 cfs was used to calibrate the roughness values assuming the flow was contained within the levees. With the chosen roughness values, the computed profile was within 0.1 foot of the measured profile for the May 1968 flow.

Because the existing levees did not have the required 3 feet of freeboard for the 100-year flood, the flood profiles were determined as if the levees did not exist. Starting water-surface elevations for the Sangamon River were calculated using the slope-area method. The slope used was determined for the farthest downstream cross section from the COE HEC-2 step-backwater computer program for the historic flood profiles. Starting water-surface elevations for Panther Creek were calculated using the slope-area method. The slope used was the average streambed slope of Panther Creek.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals. In cases where the 50- and 100-year flood elevations are close together, due to limitations of the profile scale, only the 100-year profile has been drawn.

The hydraulic analyses for this study are based only on the effects of unobstructed flow. The flood elevations shown on the profiles are, thus, considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the NGVD. Elevation reference marks used in this study are shown on the map and described in the exhibit labeled Elevation Reference Marks.

FLOOD PLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages state and local governments to adopt sound flood plain management programs. Therefore, each Flood Insurance Study provides 100-year flood elevations and delineations of the 100- and 500-year flood plain boundaries and 100-year floodway to assist communities in developing flood plain management measures.

4.1 Flood Boundaries

To provide a national standard without regional discrimination, the one-percent annual chance (100-year) flood has been adopted by FEMA as the base flood for flood plain management purposes. The 0.2-percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the 100- and 500-year flood plain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:4800 with a contour interval of 2 feet (Reference 8).

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The 100- and 500-year flood plain boundaries are indicated on the Flood Insurance Rate Map. On this map, the 100-year flood plain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE, AH, AO, A99, V, and VE) and the 500-year flood plain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 100-and 500-year flood plain boundaries are close together, only the 100-year flood plain boundary has been shown. Small areas within the flood plain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

4.2 Floodways

Encroachment on flood plains, such as structures and fill, reduces the flood-carrying capacity, increases the flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood plain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. In Illinois, however, under Revised Statutes, Section 65f, Chapter 19, as amended in 1973 (Reference 13), encroachment in the flood plain is limited to that which will cause only an insignificant increase in flood heights. Thus, at the recommendation of the Illinois DWR, a floodway having no more than a 0.1-foot surcharge has been delineated for this study.

The floodways presented in this study were computed for certain stream segments on the basis of equal conveyance reduction from each side of the flood plain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections and are shown in Table 2, Floodway Data. The computed floodways are shown on the Flood Insurance Rate Map. In cases where the floodway and the 100-year flood plain boundaries are either close together or collinear, only the floodway boundary is shown. Portions of the floodway for Panther Creek lie outside the corporate limits.

The area between the floodway and the 100-year flood plain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood by more than 0.1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 2.

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FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
PANTHER CREEK								
A	6150	1508[2]	3750	2.6	464.2	464.2	464.3	0.1
B	7650	1376	4160	2.4	466.5	466.5	466.6	0.1
C	9200	943	3860	2.5	469.1	469.1	469.2	0.1
D	11,400	645	2180	4.4	471.1	471.1	471.2	0.1
E	11,960	632[2]	2950	3.3	472.2	472.2	472.3	0.1

[1]FEET ABOVE MOUTH
[2]THIS WIDTH EXTENDS BEYOND CORPORATE LIMITS

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

VILLAGE OF CHANDLERVILLE, IL
(CASS CO.)

FLOODWAY DATA

PANTHER CREEK

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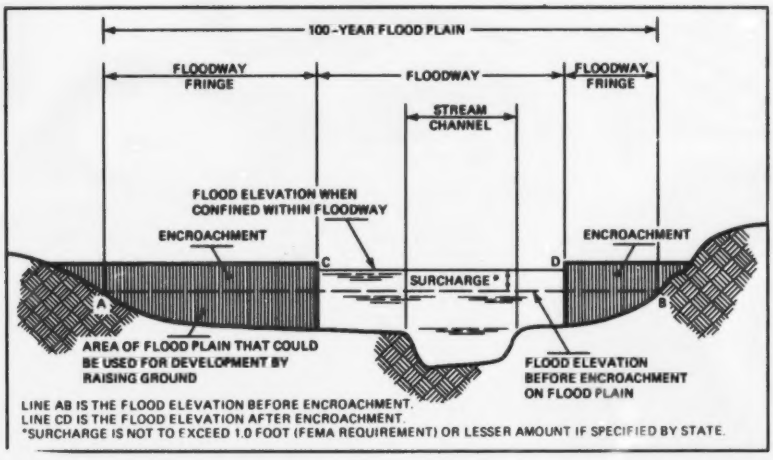
100-YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE *
A
B
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN
LINE AB IS THE FLOOD ELEVATION BEFORE ENCROACHMENT.
LINE CD IS THE FLOOD ELEVATION AFTER ENCROACHMENT.
*SURCHARGE IS NOT TO EXCEED 1.0 FOOT (FEMA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

FIGURE 2 - Floodway Schematic

The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

5.0 INSURANCE APPLICATION

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 100-year flood plains that are determined in the Flood Insurance Study by detailed methods. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 500-year flood plain, areas within the 500-year flood plain, areas of 100-year flooding where average depths are less than 1 foot, areas of 100-year flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map is designed for flood insurance and flood plain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 100-year flood plains that were studied by

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detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For flood plain management applications, the map shows by tints, screens, and symbols the 100- and 500-year flood plains, the floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

7.0 OTHER STUDIES

The COE, Rock Island District, has prepared a "Reconnaissance Report for Section 205 Flood Control Project" for Chandlerville (Reference 14). Water-surface elevations were determined at one location on Panther Creek and one location on the Sangamon River by approximate methods. The water-surface elevation on Panther Creek was approximately 4.5 feet higher than the elevation determined for this Flood Insurance Study. The water-surface elevation on the Sangamon River was approximately 2.0 feet higher than the elevation determined for this report, for the analysis where the levees were assumed not to exist. Due to its more detailed analysis, this Flood Insurance Study supersedes the results of the Reconnaissance Report.

This Flood Insurance Study does not agree with the Flood Insurance Study for the Unincorporated Areas of Cass County (Reference 15). The Flood Insurance Study for Cass County in the area of Chandlerville was prepared using approximate data and analysis for the Sangamon River and Panther Creek, and assumed that some of the levees protected the village from 100-year flooding. The more detailed investigation for the Chandlerville study has shown this assumption and the resulting flood boundaries to be inaccurate. In applying the flooding data for insurance purposes, the Chandlerville study should take precedence for areas within the corporate limits of Chandlerville.

Due to its more detailed analysis, this Flood Insurance Study supersedes the previously printed Flood Hazard Boundary Map for the Village of Chandlerville (Reference 16).

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, FEMA, 300 South Wacker Drive, Chicago, Illinois 60606.

9.0 REFERENCES AND BIBLIOGRAPHY

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14. U.S. Army Corps of Engineers, Rock Island District, Reconnaissance Report for Section 205 Flood Control Project, Chandlerville, Illinois, August 1983.

15. Federal Emergency Management Agency, Flood Insurance Study, Cass County, Unincorporated Areas, Illinois, November 1985.

16. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Hazard Boundary Map, Village of Chandlerville, Cass County, Illinois, January 1976.

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ELEVATION REFERENCE MARKS

VILLAGE OF CHANDLERVILLE

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
1	0001	463.31	copper bolt leaded to top of limestone slab 4 feet underground, access is through an iron pipe bearing an Illinois River Survey cap stamped "ELEV. 470.67 FT. MEMPHIS DATUM 1903" projecting 5 inches above the ground, located near the junction of State Route 78 and River Street, 176 feet northeast of centerline of River Street, 91.7 feet southeast of centerline of State Route 78
2	0001	467.30	disk on top of copper-coated steel rod flush with ground, protected by 6-inch tile projecting 1 inch above ground, located near center of Elmwood Park, 81.5 feet east-southeast of southeast curb of Main Street, 83.5 feet west-northwest of northwest curb of Second Street, 61.8 feet south-southwest of southwest curb of Lake Street

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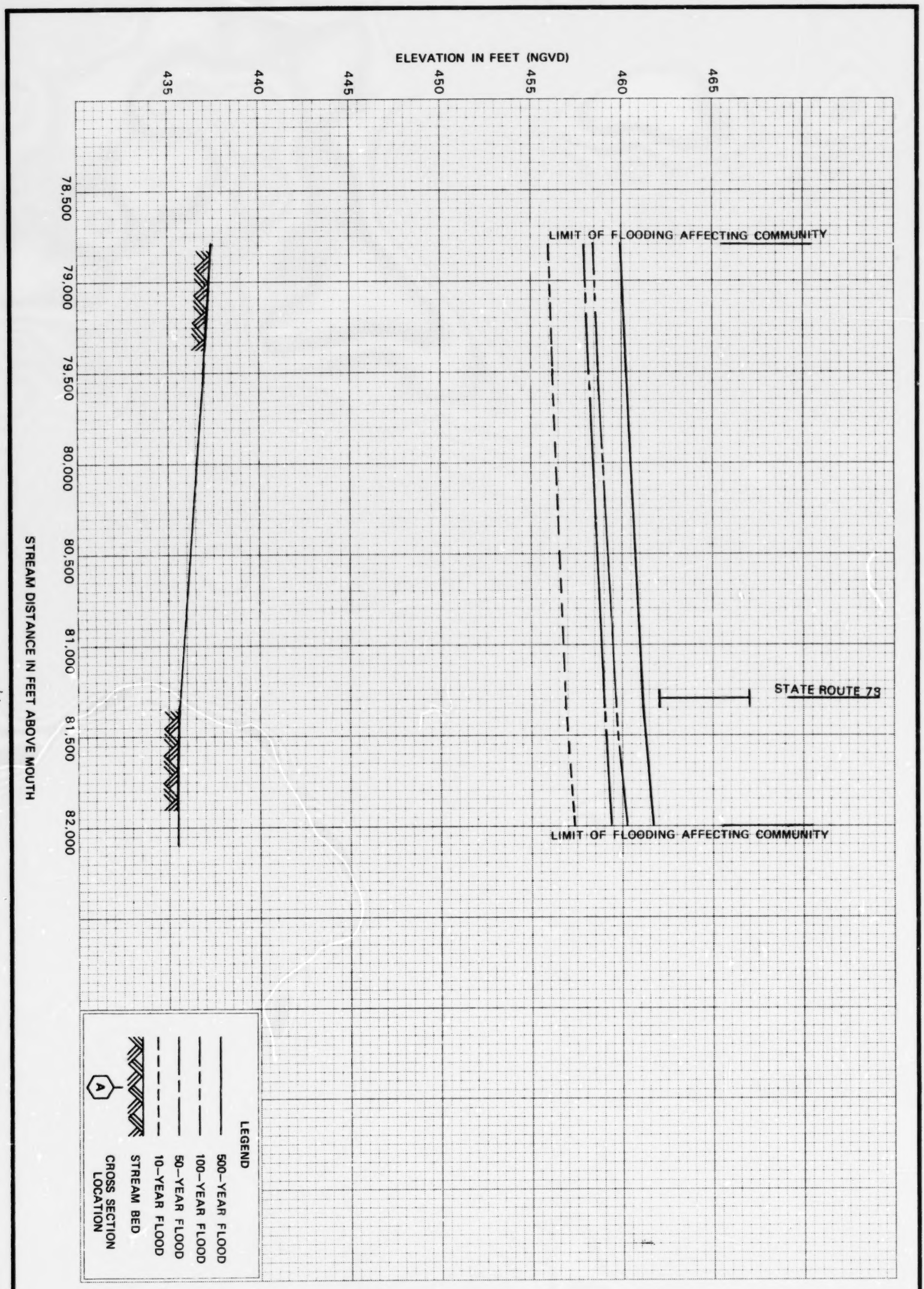

01P	FEDERAL EMERGENCY MANAGEMENT AGENCY **VILLAGE OF CHANDLERVILLE, IL** (CASS CO.)	**FLOOD PROFILES** **SANGAMON RIVER**

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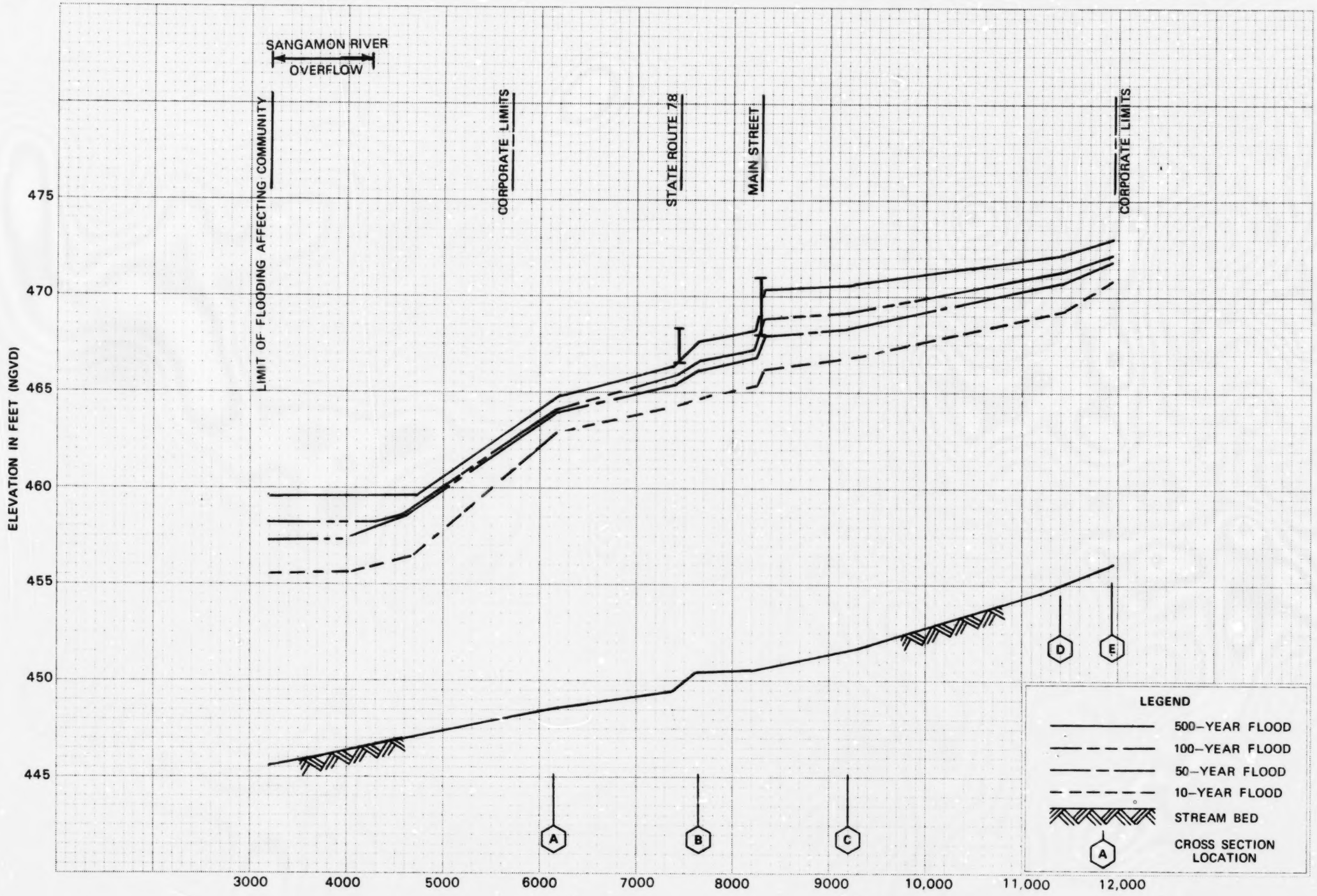

FLOOD PROFILES

PANTHER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

VILLAGE OF CHANDLERVILLE, IL

(CASS CO.)

02P

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